

*Page 1.126*  
**WHAT IS CLAIMED IS:**

1. A polymeric colored dispersant comprising the structure  $A-(B-X)_n$ , wherein:  
5 A is an organic chromophore; B is a covalently bonded linking moiety; X is a branched or linear  $C_{50}$ - $C_{200}$  polymeric covalently linked hydrocarbon; and n is an integer from 1 to 4.

10 2. The dispersant of claim 1 wherein A is selected from the group consisting of organic pigments, dyes and carbon black.

3. The dispersant of claim 1 wherein B is a moiety selected from the group consisting of O, N, and S.

15 4. The dispersant of claim 1 wherein the hydrocarbon is a branched or linear  $C_{100}$  to  $C_{150}$  hydrocarbon.

5. The dispersant of claim 1 wherein n is selected from 1 and 2.

20 6. A highly dispersed colorant dispersion comprising a polymeric colored dispersant having the structure  $A-(B-X)_n$ , wherein: A is an organic chromophore; B is a covalently bonded linking moiety; X is a branched or linear  $C_{50}$ - $C_{200}$  polymeric covalently linked hydrocarbon; and n is an integer from 1 to 4.

25 7. The dispersion of claim 6 wherein A is selected from the group consisting of organic pigments, dyes and carbon black.

8. The dispersion of claim 6 wherein B is a moiety selected from the group consisting of O, N, and S.

30 9. The dispersion of claim 6 wherein X is  $C_{100}$  to  $C_{150}$ .

10. The dispersion of claim 6 wherein n is selected from the group consisting of 1 and 2.

11. A colorant dispersion having improved color strength comprising a polymeric colored dispersant having the structure  $A-(B-X)_n$ , wherein: A is an organic chromophore; B is a covalently bonded linking moiety; X is a branched or linear  $C_{50}-C_{200}$  polymeric covalently linked hydrocarbon; and n is an integer from 1 to 4.

12. The dispersion of claim 11 wherein A is selected from the group consisting of organic pigments or dyes.

13. The dispersion of claim 11 wherein B is a moiety selected from the group consisting of O, N, and S.

14. The dispersion of claim 11 wherein X is  $C_{100}$  to  $C_{150}$ .

15. The dispersion of claim 11 wherein n is selected from the group consisting of 1 and 2.

16. A colorant dispersion comprising: (a) at least about 45 wt.% of a pigment; and (b) a polymeric colored dispersant having the structure  $A-(B-X)_n$ , wherein: A is an organic chromophore; B is a covalently bonded linking moiety; X is a branched or linear  $C_{50}-C_{200}$  polymeric covalently linked hydrocarbon; and n is an integer from 1 to 4.

17. The dispersion of claim 16 further comprising a viscosity of less than about 150 Pa.s.

18. The dispersion of claim 16 having 65 wt. % colorant.

19. The dispersion of claim 16 wherein the colorant is selected from the group consisting of organic pigments, dyes and carbon black.

20. The dispersion of claim 19 wherein the colorant is an organic pigment.

21. The dispersion of claim 20 wherein the organic pigment is selected from the group consisting of mono and diazo pigments, phthalocyanine pigments, quinacridone pigments, rhodamine dyes and pigments, perylene pigments, diketoprryoles pigments, carbon black, anthraquinone dyes and pigments, indanthrene  
5 dyes, lake pigments, dioxazine pigments, isoindolinone pigments, and dioxazine pigments.

22. The dispersion of claim 21 wherein the organic pigment is selected from the group consisting of Pigment Yellow 12, Pigment Yellow 13, Pigment Yellow 14,  
10 Pigment Yellow 74, Pigment Yellow 150, Pigment Orange 5, Pigment Orange 13, Pigment Orange 16, Pigment Orange 64, Pigment Red 2, Pigment Red 81:2, Pigment Red 122, Pigment Red 144, Pigment Red 166, Pigment Red 179, Pigment Red 184, Pigment Red 202, Pigment Red 254, Pigment Red 264, Pigment Violet 1, Pigment Violet 2, Pigment Violet 3, Pigment Violet 19, Pigment Violet 23, Pigment Blue 15:3,  
15 and Blue 15:4.

23. The dispersion of claim 16 having 65 wt.% colorant.

24. The dispersion of claim 16 wherein the dispersant is present in about 1  
20 wt.% to about 15 wt.% based on the weight of colorant.

25. The pigment dispersion of claim 24, wherein said dispersant is present in about 10 wt.% of the pigment.

25 ~~24~~ 25. The of claim 16 wherein A is selected from the group consisting of organic pigments, dyes and carbon black.

27 ~~26~~ 26. The dispersion of claim 16 wherein B is a moiety selected from the group consisting of O, N, and S.  
30

28 ~~27~~ 27. The dispersion of claim 16, wherein X is C<sub>100</sub> to C<sub>150</sub>.

29 ~~28~~. The dispersion of claim 16 wherein n is selected from the group consisting of 1 and 2.

30 ~~29~~. A printing ink composition comprising a colorant dispersion composition  
5 containing a polymeric colored dispersant having the structure  $A-(B-X)_n$ , wherein:  
A is an organic chromophore; B is a covalently bonded linking moiety; X is a branched  
or linear  $C_{50}-C_{200}$  polymeric covalently linked hydrocarbon; and n is an integer from 1 to  
4.

10 31 ~~30~~. The ink composition of claim ~~29~~ wherein the printing ink is a lithographic  
printing ink.

32 ~~31~~. The ink composition of claim ~~29~~ wherein the printing ink is a gravure  
printing ink.

15 33 ~~32~~. The ink composition of claim ~~29~~ wherein A is selected from the group  
consisting of organic pigments, dyes and carbon black.

20 34 ~~33~~. The ink composition of claim ~~29~~ wherein B is a moiety selected from the  
group consisting of O, N, and S.

35 ~~34~~. The ink composition of claim ~~29~~, wherein X is  $C_{100}$  to  $C_{150}$ .

25 36 ~~35~~. The ink composition of claim ~~29~~ wherein n is selected from 1 and 2.

30